

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number  
**WO 2005/054971 A1**

(51) International Patent Classification<sup>7</sup>: G05D 23/13

(21) International Application Number:  
PCT/IT2003/000803

(22) International Filing Date: 5 December 2003 (05.12.2003)

(25) Filing Language: Italian

(26) Publication Language: English

(71) Applicants and

(72) Inventors: RUGA, Manolo [IT/IT]; Via Regina Villa  
38, I-28024 Gozzano (IT). RUGA, Osvaldo [IT/IT]; Via  
Regina Villa, 38, I-28024 Gozzano (IT).

(74) Agent: CONCONE, Emanuele; Società Italiana Brevetti  
S.p.A., Via Carducci, 8, I-20123 Milano (IT).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR,

CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,  
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU,  
SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,  
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

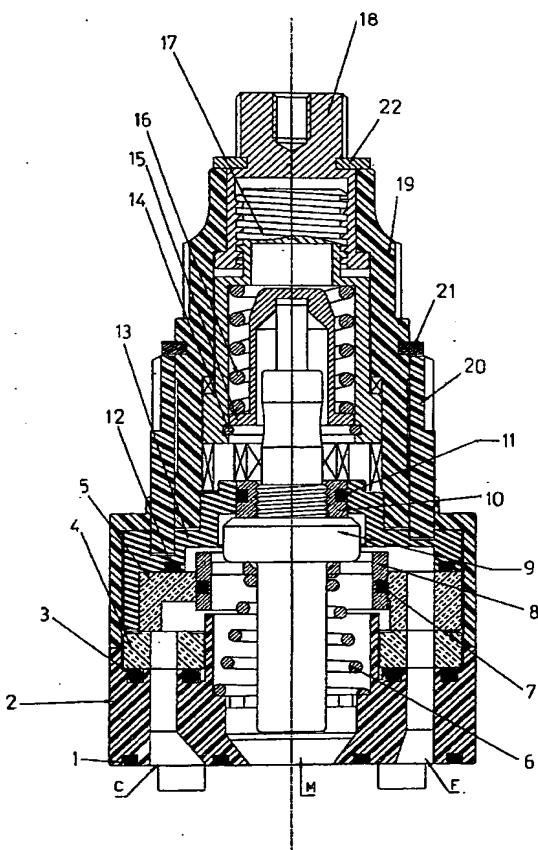
(84) Designated States (regional): ARIPO patent (BW, GH,  
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,  
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: THERMOSTATIC MIXING VALVE



(57) Abstract: The invention relates to a thermostatic mixing valve in which the access path of the hot water to the mixing chamber is completely formed within a bottom base (2) and the ceramic disks (4, 5) of the valve group, the slider (8) of the thermostatic member sealingly sliding in a central seat of the upper disk (5). By having the hot water not pass through the metallic members of the valve it is possible to eliminate the problems of asymmetric thermal expansion of said metallic members when only hot water is delivered, and also to greatly reduce the problems of calcareous encrustation since the latter build up with difficulty on the ceramic material. Furthermore, the valve is manufactured with a compact and simplified structure, including a small number of pieces, with totally independent temper-  
ature and flow rate controls.

WO 2005/054971 A1

BEST AVAILABLE COPY